ABSTRACT

Method of Interpolation

30980111 EP

A method of determining a value for a function [[which]] that is particularly useful for mapping values from one colo[[u]]r space to another ~~comprises~~ includes a series of steps, as follows. The method is applicable to n-dimensional spaces, but is particularly described for three dimensions. The first step is to establish a three dimensional lattice, the function having values at the lattice points. The next step is to record values of the function for a subset of the lattice points, the lattice points of the subset being known value lattice points. These known value lattice points form a sparse lattice (preferably the sparse lattice points are regularly spaced along orthogonal axes). A value of the function for a given lattice point is established by returning a weighted average of the values of one or more of four known value lattice points defining a tetrahedron 42 touching or enclosing the given lattice point. Each of the lattice points [[which]] that are intermediate points in a coarse lattice cube 41 is either within, or on the boundary of, at least one tetrahedron 42 whose vertices are four of the vertices of the cube.